A Graded Approach to Facility Safety Analysis Documentation

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In an effort to reduce unnecessary documentation and to reduce costs, while ensuring safe operations, LLNL has derived an approach which appropriately grades the level of safety analysis documentation with the hazard level of a facility. The focus of the LLNL effort is on Low hazard chemical handling facilities, and the approach provides grading of the level of safety basis documentation within this hazard category. The highest level of documentation proposed for an existing Low hazard facility is a Preliminary Hazard Analysis (PHA); the lowest level is a report summarizing the screening of hazardous material inventories. Estimated cost savings from the Low Hazard SAR effort currently underway at LLNL are in the area of one million dollars.

The approach is consistent with DOE Order 5481.1B, Safety Analysis and Review System (May, 1987), which states that for ongoing DOE operations, only those "which could reasonably be expected to have the potential for onsite or offsite impact to large numbers of persons or for major impacts to the environment" are covered. Since a Low hazard facility can result in only minor onsite and negligible offsite impacts, it would not fit the definition of a facility requiring a Safety Analysis Report under DOE Order 5481.1B.

LLNL learned of the successful implementation of a similar graded approach at another DOE site. This knowledge was gained through an EFCOG contact, and illustrates how effective sharing of information can lead to considerable cost savings. Hopefully, this paper will enlighten others to this possibility.

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